Adopted by BOSC 2/06

Revised June 2008

Grade Five

These guidelines have been designed to assist teachers to focus on what a typical child should know and be able to do at various times in fourth grade. The fourth grade mathematics program presents concepts that are introduced, developed or mastered and should be covered using models, explanations, number lines and representations. All concepts in the curriculum are to be taught requiring the students to explain their answers through writing or showing pictures. Problem solving, communication and reasoning are expected to be incorporated throughout the curriculum.

First Trimester
EM-Units 1, 2, 3, 4

Numbers and Operations

- Whole numbers 0-9,999,999 *M (N&O) 5-1*
- Place value of whole numbers 0-9,999,999 *M (N&O) 5-1*
- Write numbers using expanded notation and standard form *M (N&O) 5-1*
- Understand equivalencies of whole numbers 0-9,999,999 *M (N&O) 5-1*
- Identify, compare and order whole numbers to 9,999,999 *M (N&O) 5-2*
- Symbolic representation *M (N&O) 5-2*
- Prime and composite numbers *M (N&O) 5-4*
- Multiply 2 and 3 digit numbers by up to 3 digits *M (N&O) 5-3, 5-4*
- Division of whole numbers with divisors of 1-or 2-digits with and without remainders (interpret remainders) *M (N&O) 5-3, 5-4*
- Mental computation to solve problems *M (N&O) 5-6*
- Estimation to solve problems and determine reasonableness of a situation or answer with whole numbers M *(N&O) 5-7*
- Number properties (odd and even numbers, multiplicative property of zero and divisibility rules) *M (N&O) 5-8*
- Field properties (commutative) to solve problems and to simplify computations *M (N&O) 5-8*
- Identify, order and compare equivalent decimals *M (N&O) 5-1, 5-2*
- Identify, read and write decimals to the thousandths *M (N&O) 5-2*
- Addition and subtraction of decimals *M (N&O) 5-3*
- Division with decimals in the dividend (in the context of money) *M (N&O) 5-4*

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Grade Five

First Trimester (cont.)

EM-Units 1, 2, 3, 4

Geometry and Measurement

• Properties and attributes of triangles, quadrilaterals, and polygons *M (G&M) 5-1*
• Use congruence, parallelism and perpendicularity to describe sides and angles of polygons *M (G&M) 5-1*
• Similarity concepts *M (G&M) 5-5*
• Measuring angles with math tools *M (G&M) 5-7*

Functions and Algebra

Data, Statistics and Probability

GLEs in italics

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Grade Five

Second Trimester

EM-Units 5, 6, 7, 8

Numbers and Operations

- Order of operations with and without parentheses *M (N&O) 5-4*
- Identify, order, and compare equivalent fractions (halves, thirds, fourths, fifths, sixths, eighths and twelfths, powers of 10 (10, 100, 1000) *M (N&O) 5-1, 5-2*
- Identify, order and compare equivalent fractional numbers (proper, mixed numbers and improper) *M (N&O) 5-2*
- Addition and subtraction of proper fractions with unlike denominators *M (N&O) 5-3*
- Addition and subtraction of mixed numerals
- Connect common fractions ½, ¼, ¾, x/10, x/100, x/1000 to decimal equivalents *M (N&O) 5-2*
- Connect decimals to fraction equivalents *M (N&O) 5-2*
- Identify, order and compare percents *M (N&O) 5-1, 5-2*
- Connect benchmark percents (10%, 25%, 50%, 75% and 100 %) to fractions and decimals
- Employ mental and estimation strategies to solve problems and determine reasonableness of a situation or answer with fractions *M (N&O) 5-7*
- Connect numerals to quantities using models, number lines and graphs for integers (positive and negative) *M (N&O) 5-2*
- Field properties (associative, identity and distributive) to solve problems and to simplify computations *M (N&O) 5-8*

Geometry and Measurement

- 3-dimensional figures *M (G&M) 5-3*
- Perimeter, Area and Volume *M (G&M) 5-6*
- Build 3-dimensional models from two and three dimensional representations *M (G&M) 5-10*

Functions and Algebra

Data, Statistics and Probability

- Collect and record data using models, bar graphs, circle graphs and tables *M (DSP) 5-1*
- Identify and describe the best representation for the data *M (DSP) 5-1, 5-3*
- Probability concepts *M (DSP) 5-5*
- Determine if a game is fair *M (DSP) 5-5*

GLEs in italics

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Grade Five

Third Trimester

EM-Units 9, 10, 11, 12

Numbers and Operations

- Employ mental and estimation strategies to solve problems and determine reasonableness of a situation or answer with decimals *M (N&O) 5-7*

Geometry and Measurement

- Measurement for length, time, temperature, capacity, mass and weight using both standard and metric systems *M (G&M) 5-7*
- Solve problems and make conversions in both standard and metric for length, time, capacity, mass and weight *M (G&M) 5-7*
- Coordinate graphing with all 4 quadrants *M (G&M) 5-9*
- Interpret and give directions between locations on a map or coordinate grid *M (G&M) 5-9*
- Find horizontal and vertical distances on a coordinate grid in the first quadrant *M (G&M) 5-9*
- Plot and identify ordered pairs *M (G&M) 5-9*
- Transform polygons [slide (translation), flip (reflection), turn (rotation)] across x/or y axis on a 4 quadrant coordinate grid *M (G&M) 5-9*

Functions and Algebra

- Write a rule for finding specific cases of a linear relationship *M (F&A) 5-1*
- Identify and extend linear and nonlinear patterns to specific cases *M (F&A) 5-1*
- Identify, describe and compare situations that represent linear relationships (constant rates of change) *M (F&A) 5-2*
- Use letters or symbols to represent unknown quantities in solving algebraic expressions *M (F&A) 5-3*
- Evaluate expressions using whole numbers *M (F&A) 5-3*
- Equivalency between two expressions *M (F&A) 5-4*
- Find a value that will make an open sentence true using (+, -, x, ÷) *M (F&A) 5-4*
- Simplify numerical expressions with parentheses *M (F&A) 5-4*
- One step linear equations (ex. 3 + n = 15) *M (F&A) 5-4*
- Multi-step linear equations (ex. 2x + 5 = 15) *M (F&A) 5-4*

Data, Statistics and Probability

- Analyze data to draw and justify conclusions, make predications and solve problems *M (DSP) 5-1*
- Analyze patterns, trends and distributions in data using measure of central tendency *M (DSP) 5-2*
- Display experimental probability data in bar, pie, line graphs, line plots and tables *M (DSP) 5-3, 5-5*
- Experimental design *M (DSP) 5-6*

GLEs in italics